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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/867,836	05/30/2001	Eliyahou Harari	11587 M-10187-43C US	6307

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EXAMINER

TRAN, ANDREW Q

ART UNIT	PAPER NUMBER
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2824

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/867,836

Applicant(s)

HARARI ET AL.

Examiner

Andrew Q. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 63-100 is/are pending in the application.
- 4a) Of the above claim(s) 63-80 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 81-100 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date See Continuation Sheet.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :07/26/2006, 10/02/2006 and 11/22/2006.

DETAILED ACTION

Title

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested:

--Method for selective erasing and parallel programming/verifying of cell blocks in a Flash EEPROM system--.

Abstract

The abstract of the disclosure is objected to because the current abstract fails to establish a concise statement of the technical disclosure of the subject matter being claimed. Correction is required. See MPEP § 608.01(b).

Drawings

The drawings are objected to under 37 CFR § 1.81, because it is required Applicant where necessary to furnish a drawing of his or her invention for the understanding of the subject matter sought to be patented.

In Fig. 1A, circuit block 31 should be relabeled as --Memory Controller--. In Fig. 1B, circuit block 31 should be relabeled as --Memory Controller Chip--, and circuit block 40 should be relabeled as --Interface Circuit--. In Fig. 2, circuit block 31 should be relabeled as --Memory Controller--. In Fig. 3A, circuit block 233 should be relabeled as --Address Decoder--, and circuit blocks 211 and 213 should be relabeled as --Memory Sector--. In Fig. 3B, signal line 235 should be relabeled as --From Address Decoder--. In Fig. 6, next to reference numeral 31, the

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legend "Controller" should be relabeled as --Memory Controller--, and circuit block 515 should be relabeled as --REC & S/P--. In Fig. 7, next to reference numeral 31, the legend "Controller" should be relabeled as --Memory Controller--, and circuit block 603 should be relabeled as --INTF IN--. In Fig. 11, floating gate 1023 should be drawn as a continuous line, as disclosed in Figs. 9 and 10. In Fig. 12, circuit block 1081 should be relabeled as --Row Decoder--, and circuit block 1119 should be relabeled as --Erase Decoder--. In Fig. 13, signal line "Serial Out" should be relabeled as --1253-- and should be shown pointing toward circuit block 1150. In Fig. 17A, circuit blocks 1417 and 1415 should be relabeled as --Erase Decoder-- and --Program Decoder--, respectively, and circuit block 1111 should be relabeled as --Internal Address Bus--. Further in Fig. 17A, the floating gates should be shown in Master Reference Cell 1400 and Addressed Memory Cell 1420. In Fig. 17B, control gate of transistor 1465 should be relabeled as --CLK K--, and the outputs of circuit block 1480 should be relabeled as --Read Data Bit 1-- to --Read Data Bit L--, respectively. In Fig. 21B, circuit block ΔI_2 should be relabeled as --1543--. In Fig. 22, memory cells 1 to n should be shown with a floating gate, as depicted in Fig. 11.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

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pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

At paragraph [0001], line 3, --now US Pat 5,991,517,-- should be added after "1996,". At paragraph [0004], line 5, "after 10² to 10³ write/erase cycles" should be changed to -- after 10² to 10³ write/erase cycles--. At paragraph [0034], line 2, "Fig. 2A" should be changed to --Fig. 3A--. At paragraph [0041], line 1, "section 2-2" should be changed to --section 10-10--. At paragraph [0068], line 3, "system bus 33" should be changed to --system bus 23--. At paragraph [0069], line 4, "circuit 55" should be changed to --circuit 57--. At paragraph [0082], line 2-3, "Serial No. 204,175" should be changed to --Serial No. 07/204,175--, and at line 6, "incorporate" should be changed to --incorporated--. At paragraph [0084], line 9, "3(9)" should be changed to --4(9)--. At paragraph [0087], line 4, "figures 2A and 2B" should be changed to --figures 3A and 3B--. At paragraph [0093], line 8, "space" should be changed to --spare--. At paragraph [0103], line 4, "generator 507" should be changed to --generator 503--. At paragraph [0109], line 5, "Serial No. 204,175" should be changed to --Serial No. 07/204,175--. At paragraph [0112], line 2, "data file 516" should be changed to --data file 517--. At paragraph [0120], line 5, "Serial No. 204,175" should be changed to --Serial No. 07/204,175--. At paragraph [0123], line 10, "with" should be changed to --which--. At paragraph [0144], line 7, "Serial No. 323,779" should be changed to --Serial No. 07/323,779--. At paragraph [0147], penultimate line, "1071" should be changed to --1075--. At paragraph [0156], line 6, "address bus 111" should be changed to --address bus 1111--. At paragraph [0159], line 1, "Serial No.

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204,175" should be changed to --Serial No. 07/204,175--. At paragraph [0168], line 5 and 17, "Serial No. 204,175" should be changed to --Serial No. 07/204,175--, respectively. At paragraph [0182], line 3, "switches 1525" should be changed to --switches 1521--. At paragraph [0189], penultimate line, "reach" should be changed to --reached--. At paragraph [0201], line 9, "line 1801" should be changed to --line 1809--.

Appropriate correction is required.

Claim Objections

Claims 98 and 99 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claims 98 and 99 are mere duplicates of claims 82 and 83 from which claims 98 and 99 depend from.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 81-100 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 81, line 7-8, the phrase "simultaneously electrically resetting a number of said blocks less than all of the blocks in the array" is indefinite. What is meant by "electrically resetting a number of said blocks less than all of the blocks"? Further in claims 81 and 96, the

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terms "a chunk of user data" (claim 81, line 10; and claim 96, line 3) induce double inclusion of elements because it is unclear whether said terms refer to same or different "chunk of user data". In claim 87, line 2, the phrase "the spare cells within a particular block of said particular block" is indefinite in light of the disclosure, as to which "cells" are substituting and which "cells" are being substituted. In claim 89, the recitation that "the chunk of user data is stored in a cache memory prior to being programmed into the memory cells" is also unclear based on the disclosure. Claims 91 and 97 are also indefinite where all the steps of the recited method are carried out on a single IC chip. In claim 92, line 3, "their being determined" appears not to be in English. Claim 100 is also indefinite in light of the current specification.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 81-100 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-18, 32-35 and 37-39 of U.S. Patent No.

5,991,517. An obviousness-type double patenting rejection is appropriate where the conflicting

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claims are not identical, but an examined application claim is not patentably distinct from the reference claim(s) because the examined claim is either anticipated by, or would have been obvious over, the reference claim(s). See e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985). Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims respectively recite a method for preconditioning a plurality of memory blocks, and for parallel programming/verifying said memory blocks until all memory cells are properly programmed.

Claims 81-86, 88-90, 92-96 and 98-100 are similarly rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 6,914,846.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mitsuishi et al. (US Pat 4,931,997) describes a semiconductor memory having a storage buffer for saving control data during bulk erasure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Q. Tran whose telephone number is (571) 272-1885. The examiner can normally be reached on Mon - Fri 8:30 AM - 5:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard T. Elms can be reached on (571) 272-1869. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Andrew Q Tran
Primary Examiner
Art Unit 2824

at
December 19, 2006